

PACKAGING AND DISTRIBUTION DYNAMICS

A **specialist course** on how distribution hazards (shocks and vibrations) are measured, analysed, characterised and simulated and how this can help you design better packaging systems.



Delivered by **V. Rouillard**

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This course is aimed at engineers and scientists who are involved in the design, testing and optimisation of packaging systems with particular focus on minimizing product damage during distribution.

Some rudimentary knowledge of the fundamental concepts relating to mechanics and dynamics will be useful prior to attending the course. Preparatory material relating to the relevant topics will be circulated to attendees prior to the course.

When:

Friday 13 – Saturday 14 June 2025

Where:

Center for Packaging and Unit Load Design
Virginia Tech. Blacksburg, VA, USA
and online

Course Contents

- In-depth examination of the dynamic motions that affect products and packaging during distribution.
- Analysis techniques for characterising and evaluating these motions and resulting forces including:
 - How to calculate and interpret Vibration Power Density Spectra
 - Statistical techniques to evaluate the random fluctuations in vibration levels.
 - How to detect and deal with drive train and structural vibrations
 - How to detect and characterise shocks and transients during transport
 - How to analyse and characterise maneuvering acceleration and forces:
- Important engineering considerations for measurement of shocks, vibrations and maneuvering motions
- Evaluation of current measurement technologies
- A critical review of current technologies, methods and protocols for laboratory simulation.
- How to plan laboratory tests relevant to specific scenarios including: multi-axial vibrations simulation, nonstationary vibrations, shock-on-random vibrations, sine and swept-sine-on random simulation; lateral (maneuvering) motion testing.

The course will include practical exercises as well as demonstrations of the application of important laboratory test protocols. Attendees will be supplied with course notes.



Your instructor:

Vincent Rouillard currently holds an Honorary Professorial Fellowship in Mechanical Engineering at Victoria University where he is associated with the Engineered Packaging and Distribution Research Group.

He has over 30 years' experience Engineering education and distribution packaging research. He has published 193 research articles to date most addressing distribution dynamics.

Further details of Prof. Rouillard's credentials and experience can be found [here](#).

Registration:

Public attendee: USD 1,250
IAPRI & CPULD members: USD 850.00
Students: USD 650.00

Register at:

lapri2024Roanoke.com

More information:

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